undergoing chronic hemodialysis or patients with immune deficiency states are particularly prone to HBAg-positive chronic liver disease.

Preliminary data suggest that inactivated HBAg may lead to the development of a hepatitis vaccine and that antibody to HBAg may confer some protection against the development of long incubation period hepatitis. These promising studies require confirmation.

The discovery of HBAg has led to new insight into the pathogenesis of acute and chronic liver disease. The HBAg assay offers important diagnostic and prognostic information to the clinician. Furthermore, exclusion of HBAg positive blood donors may significantly reduce the frequency of post-transfusion hepatitis.

GARY L. GITNICK, MD

REFERENCES

Kwak KS, Gitnick GL, Sturgeon PS: A hepatitis associated antigen—Screening by automated complement fixation. Am J Clin Pathol 59:41, 1973

Koretz RL, Sheinbaum HA, Gitnick GL: Are highly sensitive screening methods for detecting Hepatitis B antigen useful in preventing post-transfusion hepatitis? Gastroenterology 64:171, 1973

Some Effects of Ischemia on Heart Muscle

MYOCARDIAL ISCHEMIA produces a rapid loss of contractile strength. Fogelman et al demonstrated that diastolic motion of the posterior ventricular wall is impaired during angina pectoris. This abnormality was reversed by nitroglycerin and is consistent with evidence for impaired relaxation of ischemic muscle observed in the animal laboratory. Impaired relaxation can contribute to decreased distensibility of the ischemic left ventricle during myocardial infarction and thereby explain the high left ventricular filling pressures seen in some patients with acute infarctions despite normal sized cardiac silhouettes. Digitalis can improve myocardial function early after acute myocardial infarction but without significant increase in cardiac output. The failure of digitalis to alter ventricular distensibility may account for failure of the drug to significantly improve cardiac function in some infarct patients, particularly those with small heart size.

KENNETH I. SHINE, MD

REFERENCES

Fogelman A, Abassi AS, Pearce ML, et al: Echocardiography of posterior left ventricular wall motion during angina. Circulation 46:905, 1972

Rahimtoola SH, Sinno MZ, Chuquimia R, et al: Effects of ouabain on impaired left ventricular function in acute myocardial infarction. N Engl J Med 287:527-531, Sep 14 1972

The Use of Sulfonylureas in the Treatment of Adult Onset Diabetes

RESULTS OF THE University Group Diabetes Program (UGDP) study revealed an increased cardiovascular mortality and no clear-cut reduction in vascular complications in diabetics treated with tolbutamide (Orinase®). This led the Federal Drug Administration to advise against the use of sulfonylureas in general, except in very special circumstances. However, other publications do not confirm these observations and a large body of practicing diabetologists, I among them, feel that when sulfonylureas can be proved to be effective in lowering blood sugar, their use is actually beneficial and indicated. I institute a strict diet, attempt weight reduction at all cost, and often achieve normalization of the fasting and two-hour postprandial blood sugar. Only if this fails and the patient is not ketoacidosis-prone are sulfonylureas given for up to two weeks.

After this period, a two-hour postprandial blood sugar, after the patient's usual breakfast, should fall within 10 mg per 100 ml of the fasting level. Failing to achieve postprandial blood sugar control, I start insulin, since 40 percent of patients on sulfonylureas may show secondary failure within a five-year period of treatment.

PETER FORSHAM, MD

REFERENCES

The University Group Diabetes Program. Diabetes 19: Supplement 2, 1970

Feinstein AR: An analytic appraisal of the University Group Diabetes Program study. Clin Pharmacol Ther 12:167-191, Mar-Apr 1971

Protamine Sulfate Test—Its Role in Differentiating Disseminated Intravascular Clotting from Primary Fibrinolysis

DISSEMINATED INTRAVASCULAR clotting (DIC) and primary fibrinolysis are disorders in coagulation associated with a number of common pathologic conditions. The therapy for each of these conditions is specific. Therefore, erring by treating disseminated intravascular clotting with epsilon amino caproic acid or primary fibrinolysis with heparin may lead to intensification of the pathologic process with subsequent bleeding or thrombosis. Laboratory studies such as the partial thromboplastin time, Quick prothrombin time, thrombin time, and fibrinogen titer only detect re-